

### P a t e n t   C l a i m s

1. Self-adhesive security label for a data carrier, such as a security document or document of value, with a substrate (40), to the front of which are applied security features (12-18, 42) and the back of which is provided with a cold adhesive foil (34), characterized in that the security label contains an integrated circuit (30) disposed in a recess (36) of the adhesive foil (34) for storing security data and an antenna (32) disposed intermediate between substrate (40) and adhesive foil (34) and connected with the integrated circuit (30) for a contactless communication with the integrated circuit (30).
2. Security label according to claim 1, characterized in that the recess (36) with the integrated circuit (30) is closed by a covering element (38), in particular a self-adhesive covering element.
3. Security label according to claim 1 or 2, characterized in that the antenna (32) is printed on, bonded to or embossed into the substrate (40).
4. Security label according to at least one of claims 1 to 3, characterized in that the front-side security features have a passport photograph (12), a finely structured pattern, in particular a guilloche print, machine readable features, such as a machine readable note (14a-14e), fluorescent substances, magnetic or electrically conductive substances, or a polydimensional bar code.
5. Security label according to at least one of claims 1 to 4, characterized in that the front-side security features contain a printed area (16, 18) produced by intaglio printing method.
6. Security label according to at least one of claims 1 to 5, characterized in that the front-side security features (12-18, 42) at least partially are covered with a foil (48), wherein the foil (48) preferably has a thickness of less than 20 micron, especially preferred about 6 micron to about 12 micron.
7. Security label according to claim 6, characterized in that the foil (48) contains holographic diffraction structures.

8. Security label according to at least one of claims 1 to 7, characterized in that the substrate (40) is made of cotton paper or paper with a mixture of cotton/synthetic fiber.
9. Data carrier, in particular document of value, such as bank note, passport, identification document, visa sticker or the like, with a security label (10) according to at least one of claims 1 to 8.
10. Data carrier according to claim 9, characterized in that the adherence strengths of the cold adhesive foil (34) and of the bond between the integrated circuit (30) and the antenna (32) are adjusted to each other such that a removal of the security label (10) from the data carrier results in damaging the antenna (32) or separating antenna (32) and integrated circuit (30).
11. Method for producing a self-adhesive security label for a data carrier including the following procedure steps:
  - a) providing a substrate;
  - b) applying security features to a front of the substrate;
  - c) applying an antenna arrangement to a back of the substrate;
  - d) applying a cold adhesive foil with a recess in the area of the antenna arrangement to the back of the substrate which is provided with the antenna arrangement, and
  - e) incorporating an integrated circuit into the recess and connecting the integrated circuit with the antenna arrangement.
12. Method according to claim 11, characterized in that the antenna arrangement is applied by screen printing conductive inks.
13. Method according to claim 11, characterized in that the antenna arrangement is applied by hot stamping or bonding a conductive foil to the back of the substrate.

14. Method according to at least one of claims 11 to 13, characterized in that the recess of the adhesive foil after step e) is closed with a self-adhesive covering element.
15. Method according to at least one of claims 11 to 14, characterized in that in step b)
  - b1) the reel-fed substrate is provided with a background print by offset printing method.
16. Method according to at least one of claims 11 to 15, characterized in that the steps c) and d) are effected in a reel-fed manner.
17. Method according to at least one of claims 11 to 16, characterized in that in step b)
  - b2) a printed area is produced on the substrate by intaglio printing method.
18. Method according to claim 17, characterized in that the step b2) is carried out in sheet format after the steps c) and d) and before step e).